

App. No. 09/691325
Office Action Dated April 22, 2004
Amd. Dated August 23, 2004

REMARKS

Reconsideration is respectfully requested in view of the above amendments and following remarks. Claims 1, 7, 14, 22 and 34 are hereby amended. Claims 8 and 23 have been canceled without prejudice or disclaimer. No new matter has been added. Claims 1-7, 12-22 and 34-38 are pending.

The present invention is directed to a grout for making watertight screens where the grout has a dual function. The grout is used as a drilling fluid and it is used as a hardening(setting) material that ensures watertightness, where the setting of the grout is carried out without the addition of retarders. The grout must stay in a liquid state during the time needed for perforation, which can range between 5 and 8 hours, or even longer in the case of deep screens. These properties for the grout are achieved by using a blast furnace slag having a maximum grain size of between 50 μm and 100 μm , where the grout cement/water ratio is between 0.1 and 0.25. Example 1 of the present invention shows the importance of the maximum grain size of the slag. If the slag is too fine, 40 μm , a retarder must be used. If the slag is too coarse, 120 μm , an accelerator must be used.

Claim rejections - 35 U.S.C. § 102

Claims 1-8, 13-20, 22, 23 and 34-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Cowan et al. (US 5,343,952). This rejection is rendered moot, as claims 8 and 23 have been canceled, claims 15-20 and 22 depend from claim 14, which was not subject to the rejection, and in view of the following. Applicant respectfully traverses the rejection.

Claim 1 is directed to a grout for watertight screens. The grout consists of water, a natural or modified clay, a blast furnace slag having a maximum grain size between 50

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μm and 100 μm and an activating agent. The grout has a cement/water ratio of between 0.1 and 0.25.

Claim 14 is directed to an excavation fluid. The excavation fluid comprises a grout consisting of water, a natural or modified clay, a blast furnace slag having a maximum grain size between 50 μm and 100 μm , and an activating agent. The grout has a cement/water weight ratio between 0.1 and 0.25.

Claim 34 is directed to a method for the preparation of a grout for making a watertight screen. The grout comprising a cement, the improvement comprising using a blast furnace slag having a maximum grain size of between 50 μm and 100 μm as the cement. The grout has a cement/water weight ratio between 0.1 and 0.25.

Cowan teaches a method for preventing migration of fluids in a well to be abandoned where the drilling fluid is either a conventional oil mud or a mud containing a small amount of blast furnace slag without activating agent. Cowen teaches the use of "NEWCEM", for use as the blast furnace slag. Cowen however does not suggest or disclose that "NEWCEM" has a maximum grain size between 50 μm and 100 μm . Cowan further teaches blast furnace slag having a relatively small particle is frequently desirable, where the "fine" particles are in the range of 4,000 to 7,000 cm^2/g Blaine specific surface area with a corresponding grain size of 16-31 μm . Therefore, Cowen fails to teach or suggest a maximum grain size between 50 μm and 100 μm , Cowen also fails to teach or suggest grout having a cement/water ratio between 0.1 and 0.25. Furthermore, Cowen does not suggest that the cementious slurry of Cowen can be used as a grout for making watertight screens. Thus, Cowen fails to anticipate claims 1, 14 and 34. Withdrawal of the rejection is respectfully requested.

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Claims 2-7 and 13 depend from claim 1, claims 15-20 and 22 depend from claim 14 and claims 35-38 depend from claim 34. For the reasons discussed above for claims 1, 14 and 34, withdrawal of the rejection is respectfully requested.

Claims 1, 3-8, 13, 14, 16-20, 22, 23, 34 and 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Hale et al. (US 5,361,842). This rejection is rendered moot, as claims 8 and 23 have been canceled and in view of the following. Applicant respectfully traverses the rejection.

Hale teaches a drilling fluid comprising water, blast furnace slag, a silicate and a retarder. The fluid is activated to produce a cement can comprise various additives such as clay. Hale teaches away from the present invention by including a retarder in the fluid, which Hale indicates is necessary. As discussed above for claims 1, 14 and 22 the properties for the grout are achieved by using a blast furnace slag having a maximum grain size of between 50 μm and 100 μm . Example 1 of the present invention shows the importance of the maximum grain size of the slag, if the slag is too fine, 40 μm , a retarder must be used. Thus, Hale does not anticipate claims 1, 14 and 34. Withdrawal of the rejection is respectfully requested.

Claims 3-7 and 13 depend from claim 1, claims 16-20 and 22 depend from claim 14 and claims 36-38 depend from claim 34. For the reasons discussed above for claims 1, 14 and 34, withdrawal of the rejection is respectfully requested.

Claims 1, 2, 5, 6, 12-15, 18-21, 34, 35 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Rac et al. (US 5,447,197). Applicant respectfully traverses the rejection.

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Rae teaches a storable, hydraulically-active, cementitious slurry made from a hydraulically-active cementitious material such as ground granulated blast furnace slag. The slurry further comprises a set retarder, which is necessary to prevent the setting of the slurry during storage. Rae teaches away from the present invention by including a retarder in the slurry. As discussed above for claims 1, 14 and 34 the properties for the grout are achieved by using a blast furnace slag having a maximum grain size of between 50 μm and 100 μm . Example 1 of the present invention shows the importance of the maximum grain size of the slag, if the slag is too fine, 40 μm , a retarder must be used. Thus, Hale does not anticipate claims 1, 14 and 34. Withdrawal of the rejection is respectfully requested.

Claims 2, 5, 6, 12-13 depend from claim 1, claims 15 and 18-21 depend from claim 14 and claims 35 and 38 depend from claim 34. For the reasons discussed above for claims 1, 14 and 22, withdrawal of the rejection is respectfully requested.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions or concerns regarding this communication can be directed to the undersigned attorney, John J. Gresens, Reg. No. 33,112, at (612)371.5265.

Respectfully submitted,

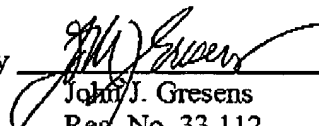
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